Team Update 04

GENERAL

Event Manual, Section 7 Ceremonies

E701 ***If in the pits during Ceremonies, shhhhhh.** During Ceremonies <mark>outside of Playoff MATCHES</mark>, team members may not:

    A. use power tools
    B. use loud hand tools (hammers, saws, etc.)
    C. shout, yell, or use loud voices, unless as a demonstration of approval during a ceremonial activity.

E702 ***Pit person limit during Ceremonies is 5.** No more than 5 team members may be in the pits during Ceremonies <mark>outside of Playoff MATCHES</mark>.

Q&A

The answer to Q49 is updated as follows:

> The MATCH will only start if there is a GAME PIECE covering or surrounding <mark>the center of</mark> each STAGING MARK. If an ALLIANCE does not place a GAME PIECE on a STAGING MARK, the appropriate GAME PIECE will be placed on that STAGING MARK as detailed in Section 6.1.1.

GAME MANUAL

Section 5.5 GRIDS

CUBE NODES are surrounded by 3 in. (~ ~~5~~ <mark>8</mark> cm) tall vertical walls, with the exception of the rear wall of the top ROW CUBE NODE which is angled.

Section 6.4 Scoring

All scores are assessed and updated throughout the MATCH, except as follows:

    A. assessment of CHARGE STATION scoring occurs 3 seconds after the ARENA timer displays 0 following AUTO
    B. GAME PIECES scored in the GRID continues for up to 3 seconds after the ARENA timer displays 0 following AUTO.
    C. assessment of <mark>PARKING and</mark> CHARGE STATION scoring occurs 3 seconds after the ARENA timer displays 0 following TELEOP

D. GAME PIECES scored in the GRID continues for up to 3 seconds after the ARENA timer displays 0 following TELEOP.

Section 7.2 ROBOT to ROBOT Interaction

G205 ***This isn't combat robotics.** A ROBOT may not damage or functionally impair an opponent ROBOT in either of the following ways:

A. deliberately, as perceived by a REFEREE.

B. regardless of intent, by initiating contact inside the vertical projection of an opponent ROBOT'S FRAME PERIMETER. Contact between the ROBOT'S BUMPERS or COMPONENTS inside the ROBOT'S FRAME PERIMETER and COMPONENTS inside an opening of an opponent's BUMPERS is an exception to this rule.

Violation: TECH FOUL and YELLOW CARD. If opponent ROBOT is unable to drive, TECH FOUL and RED CARD

> *FIRST* Robotics Competition can be a full-contact competition and may include rigorous game play. While this rule aims to limit severe damage to ROBOTS, teams should design their ROBOTS to be robust.
>
> The exception in G205-B effectively means that ROBOTS with BUMPER gaps are at their own risk regarding damaging contact in these areas.
>
> Examples of violations of this rule include, but are not limited to:
>
> a. A ROBOT leaves an arm extended, spins around to change course, and unintentionally hits and damages a COMPONENT inside the FRAME PERIMETER of a nearby opponent ROBOT.
> b. A ROBOT, in the process of trying to quickly reverse direction, tips up on a single pair of wheels, lands atop an opponent ROBOT, and damages a COMPONENT inside that opponent's FRAME PERIMETER.
> c. A ROBOT high-speed rams and/or REPEATEDLY smashes an opponent ROBOT and causes damage. The REFEREE infers that the ROBOT was deliberately trying to the damage the opponent's ROBOT.
>
> Examples of functionally impairing another ROBOT include, but are not limited to:
>
> d. opening an opponent's relief valve such that the opponent's air pressure drops and
> e. powering off an opponent's ROBOT (this example also clearly results in a RED CARD because the ROBOT is no longer able to drive).
>
> At the conclusion of the MATCH, the Head REFEREE may elect to visually inspect a ROBOT to confirm violations of this rule made during a MATCH and remove the violation if the damage cannot be verified.
>
> For the purposes of this rule, "initiating contact" requires movement towards an opponent ROBOT.
>
> In a collision, it's possible for both ROBOTS to initiate contact.

"Unable to drive" means that because of the incident, the DRIVER can no longer drive to a desired location in a reasonable time (generally). For example, if a ROBOT can only move in circles, or can only move extremely slowly, the ROBOT is considered unable to drive.

Section 9.4 BUMPER Rules

R408   ***BUMPER construction.** BUMPERS must be constructed as follows (see Figure 9-7):

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D.   be covered with a rugged, smooth cloth with no additional coating applied by the team except for BUMPER markings permitted per R405 (multiple layers of cloth and seams are permitted if needed to accommodate R405 and/or R406, provided the cross section in Figure 9-7 is not significantly altered).

> Silk and bedding are not considered rugged cloths, however 1000D Cordura is. Tape (e.g. gaffer's tape) matching the BUMPER color is allowed to patch small holes on a temporary basis.
>
> It is expected that there may be multiple layers of cloth as fabric is folded to accommodate the corners and seams of BUMPERS.
>
> Plastic coated fabrics (e.g. pleather) are not compliant with this rule.

The cloth must completely enclose all exterior surfaces of the wood and pool noodle material when the BUMPER is installed on the ROBOT. The fabric covering the BUMPERS must be solid in color.

...

Section 12 Glossary

Term	Definition
PARK	the state of a ROBOT whose BUMPERS are completely contained within its COMMUNITY but does not meet the criteria for DOCKED